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BUSINESS MANAGER FOR THE BUREAU OF ENTOMOLOGY

we have all been impressed, I am sure, with the increased complexity in recent years of the administrative work of the Bureau as relating to accounting, the Budget, publications, efficiency ratings, etc. After careful consideration, and in consultation with my various associates, as to what could be done to further facilitate the work of the Bureau, it has been thought advisable to bring a man of scientific qualifications into the business administration of the Bureau. On account of his especial qualifications I have requested Mr. S. A. Rohwer to take on the duties of Business Manager of the Bureau, in addition to his administrative duties as head of the Taxonomic Division, quartered in the National Museum.

The position of Administrative Consultant in the Bureau is established. Mr. E. B. O'Leary, by reason of his wide experience in the Bureau and his special knowledge of Bureau procedure, has been chosen to fill this position. He will assist in various matters which are referred to him in regard to the general business administration of the Bureau; will act as advisor on matters of inter-Bureau and inter-Departmental contacts, and do research on business methods leading to efficient procedure. I must take this opportunity to express to all of you my very high regard for Mr. O'leary and my great feeling of debt to him, not only personally but officially, for his absolutely untiring efforts during the long years that he has played a most important role in the constantly increasing and most intricate and puzzling aspects of Bureau administration. With this partial reorganization he will be relieved of much detail and will be able to concentrate on the larger questions in which the counsel of his able and experienced mind will be necessary.

L. O. H.

STORED-PRODUCT INSECT INVESTIGATIONS

E. A. Back, Senior Entomologist, in Charge

S. E. McClendon spent a portion of April in Louisiana, visiting several large plantations where yearly observations as to corn weevil conditions are under way. Plantation managers are glad to see Mr. McClendon, for the Bureau's advice is easily translated into profits reducible to dollars and cents. The owners of one plantation claim that after putting the Bureau's information into practice they saved 3,000 bushels of corn a year.

Lloyd E. Jackson, Senior Industrial Fellow of the Mellon Institute of Industrial Research, University of Pittsburgh, visited the laboratory in April to learn the latest developments in experiments with so-called moth-proofing solutions containing quinidine oleate.

The Millers Review and Dixie Miller printed in its April number a portion of Department Bulletin 872, "Insect Control in Flour Mills."

Early in April the Supply Division of the U. S. Veterans Bureau had bales of army blankets from its Chicago warehouse forwarded to Washington for examination and advice as to condition and protection from fabric pests. the protection of 100,000 blankets was involved.

At the request of C. C. Hubbard, Research Associate of the National Association of Dyers and Cleaners, and of the Textile Section of the Bureau of Standards, tests were started and completed in April to determine whether coatings of various proportions of paraffin dissolved in naphtha had any value in rendering fabrics and furs immune to attack by fabric pests. Unfortunately, the paraffin was found to be of no appreciable value.

J. C. Hamlin and W. D. Reed, of the Dried Fruit Insect Investigations, have an interesting article in the April issue of the Journal of Economic Entomology, entitled "Insect Revival After Fumigation."

On April 8, J. C. Bridwell, formerly of this office, arrived in New York after a sojourn in India of two and a half years. Mr. Bridwell states that he collected in India about 40 species of bruchids, representing 33 unrecognized species, and including 6 undescribed genera. Mr. Bridwell brought back to this country the bruchid Collection of the Mysore State, entrusted to him by Dr. Kunhi Kannan, and the bruchids of the Madras Presidency loaned by Rao Saheb Ramachandra Rao of Coimbatore. Mr. Bridwell arrived in Washington April 28.

In the April number of "The Bulletin," issued exclusively for the members of the National Retail Dry Goods Association, is an article covering five pages, "Fur Storage by the Fumigation Method," by A. W. Einstein, Manager of the Merchandise Managers Group. The purpose of this article is to discuss the fur-storage vaults of Bullocks, Los Angeles' largest department store. The system, developed from advice received from this Bureau, couples tight storage with fumigation, and supplants the more costly cold storage units in a modern establishment. Department stores throughout the

country are keenly interested in this new development, for it is much less expensive than the method in use. About one and a half pages are given to printing an extract from a statement solicited from this Bureau.

E. H. Lane, President of The Lane Company, of Altavista, Va., the largest manufacturer of cedar chests in America, called in April to learn the result of the Bureau's experiments to determine the comparative value of chests of solid red cedar, as compared with those of other woods containing a lining of cedar veneer.

This Division has recently learned from its correspondence with the Exporters and Importers Adjustment Bureau of New York that in the latter part of 1926 stored-product insects caused a loss of more than \$50,000 in the export flour business.

E. A. Back spent April 9 in Philadelphia, where a long-term experiment is in progress in a woolen factory, having for its object the elimination of losses caused by clothes moths. It is claimed that these losses amount to about \$3,000 per month.

Dr. Johns, of the Standard Oil Company, visited the Bureau in April to learn the results of certain experiments with mothproofing solutions.

One furniture warehouseman doing a large business recently wished advice as to which of two chemicals in crystalline form was the better for his purpose. The Bureau's experiments have indicated that the chemicals were of practically the same value. Since one costs 75, and the other only 7, cents per pound, the advice given meant a worthwhile saving in the correspondent's storage plant.

C. W. Dipman, Editor of the Progressive Grocer, recently submitted for criticism by this Division an article by R. F. Linder, entitled "Don't Let the Weevils Eat Up Your Profits and Reputation." This article, published in April, claims that grocery interests suffer an annual loss of \$200,000,000 through the attack of stored-product insects.

Hon. Harry A. McBride, Vice Consul at Malaga, Spain, was a caller in the latter part of April. He was particularly interested in obtaining information regarding attacks of insects on Spanish raisins and almonds. Shipments of almonds from Spain in 1926 arrived at their destinations more badly infested than usual. It was interesting to learn from Mr. McBride that directions for fumigations, given several years ago to Malaga interests, had resulted in routine fumigations in almond warehouses, and that losses caused by stored-product insects to almonds in transit have been greatly lessened.

Donald L. Kieffer, in an article entitled "Bean Weevils Are a Community Problem" appearing in the Pacific Rural Press for April 9, stated that in 1926 bean weevils were responsible for a loss to farmers in San Joaquin, Stanislaus, and Merced Counties, Calif., of from one to one and a quarter million dollars. About 70 per cent of their consignments of beans were found on their arrival at warehouses to be infested with these insects. "It is now the practice for dealers to knock off fifty cents per hundred when they buy in these counties, fearing fumigation will not provide sufficient insur-

ance against rejections of the 'reconditioned' stock when it gets east. Then if the eastern buyer does reject, the California dealer, without much protest, passes him fifty cents a bag to adjust the error. If there is no rejection the dealer at this end is in pocket that fifty cents. The grower of those beans is out just that much anyway. . . . That is a little of the tax he has to pay for having bean weevils on his place, in his thresher or in the warehouse where he stores his beans. . . . Honest cooperation between growers, dealers and warehousemen must come. . . . The weevil problem is squarely up to Stanislaus, San Joaquin and Merced Counties to straighten out by community cooperation." This is an old story to A. O. Larson and C. K. Fisher, who have developed and preached these facts that others are now making their own. When in Stanislaus County this month Mr. Larson spoke of the weevil situation before the Turlock Chamber of Commerce, a special committee for the county Board of Supervisors, the Agricultural Committee, the Modesto Chamber of Commerce, and the County Farm Bureau. The development of community effort based on information resulting from tedious examinations of warehouse receipts and samples, and the examination of beans on various farms was part of Mr. Larson's program while checking up on conditions in Tegner, Turlock, Mitchell, Keyes, Denair, Hughson, Fairview, Patterson, Paradise, Salida, Prescott, Ceres, and Mt. View.

FOREST INSECT INVESTIGATIONS

F. C. Craighead, Senior Entomologist, in Charge

In the latter part of March F. C. Craighead and J. A. Beal spent some time on the Choctowhatchee Division of the Florida National Forest, making a preliminary study of the turpentine borer (Buprestis apricans Hbst.). This insect causes serious losses in longleaf and slash pines after they have been operated for turpentine. The more conservative types of operating adopted by the Forest Service prevent much of this damage, though faces exposed for a number of years are finally attacked.

Early in April R. A. St. George and J. A. Beal began the summer work at Bent Creek, the location of the field laboratory near Asheville, N. C. It was found that low temperatures in the past winter had caused a high mortality in overwintering broods of Dendroctonus valens.

Dr. T. E. Snyder left Washington on April 5 to make an inspection of black walnut gun-stock blanks, and other timber, all infested by Lyctus powder-post beetles, and stored at Rock Island Arsenal, Rock Island, Ill., for the Ordnance Division of the War Department. On his return trip to Washington he stopped at the Forest Products Laboratory at Madison, Wis., to consult the Forest Service officials regarding cooperative work on tests of wood preservation, and returned to Washington April 9,

William Middleton left Washington April 19 for a short trip to Willow Grove, Pa., to study the results obtained in fumigation of boxwood for the boxwood leaf miner. He returned to Washington on April 23.

GIPSY MOTH AND BROWN-TAIL MOTH INVESTIGATIONS

A. F. Burgess, Senior Entomologist, in Charge

A. F. Burgess spent the week of March 1 and the last part of the following week in Washington.

On March 30 A. F. Burgess gave a 15-minute talk on "The Gipsy Moth," as part of the Burgess Radio Nature League program from the Westinghouse Radio Station WBZ.

H. L. McIntyre, Supervisor of Gipsy Moth Control of the New York Conservation Commission, spent April 8 and 9 at the Melrose Office, where a conference was held to discuss the progress of work in the barrier zone and to formulate plans for future work.

The Secretary of Agriculture, Hon. W. M. Jardine, with Messrs. M. S. Eisenhower and E. H. Swing, visited the Gipsy Moth Office and Laboratory at Melrose Highlands on April 8.

Prof. A. L. Melander, of the College of the City of New York, and Mrs. Melander and Prof. C. T. Brues, of the Bussey Institute, and Mrs. Brues, visited the Gipsy Moth Laboratory in April. L. G. Baumhofer, of the Division of Forest Insects, also stopped at the Laboratory recently.

S. S. Crossman spent part of the day of April 14 with H. L. McIntyre at Albany, N. Y., and the 15th and 16th in Washington in connection with gipsy moth investigations.

C. W. Collins and D. F. Barnes spent April 19 at Albany, N. Y., with Dr. E. P. Felt and H. L. McIntyre, discussing problems connected with experiments in balloon drifting which are to be conducted this spring.

M. T. Smulyan was in Washington April 20 and 21 in consultation with S. A. Rohwer and others at the United States National Museum.

S. J. Dennis, of the Division of Agricultural Engineering, Bureau of Public Roads, has been temporarily transferred to the Gipsy Moth and Brown-tail Moth work to investigate possible improvements in refrigeration equipment needed at the Laboratory, and in connection with developing improvements on the present spraying and dusting apparatus used in artificial control work.

A. F. Burgess, H. L. Blaisdell, and J. N. Summers spent several days in the week of April 25 investigating conditions in the barrier zone and in bordering towns. By previous arrangement Harold L. Bailey, Entomologist of the Vermont Department of Agriculture, was met at Brattleboro, and several bad infestations east of the barrier zone were inspected and arrangements completed for conducting cooperative control work to prevent spread from these colonies. In the course of the trip a conference was held at Rouses Point, N. Y., with L. S. McLaine and S. H. Short, of the Entomological Branch, Department of Agriculture, Ottawa, Canada, and the work in the barrier zone and in the Canadian territory was thoroughly discussed.

TAXONOMIC INVESTIGATIONS

S. A. Rohwer, Senior Entomologist, in Charge

The finding of Gryllus domesticus in great abundance in Baltimore, New York, and various other localities in the eastern part of the United States has been reported, but no specimens have been received for the National Collection. We would like to have a long series of specimens of both sexes in adult and nymphal stages. It may be distinguished from the other species of Gryllus by its generally lighter color and by the two black bands across the forehead.

T. H. Colbrook Taylor, who for the last three years has been engaged by the British Government in the study and importation of parasites for the control of insects affecting the coconut palm in the Fiji Islands, recently spent a few hours of a short stay in Washington consulting with various specialists in the Museum regarding features of his work. He was on his way to his home in England for a vacation. Mr. Taylor reported that the establishment in the Islands of a certain tachinid fly, as a parasite of a moth which was threatening to destroy the copra industry, had proven a phenomenal success, the moth having been reduced to a point where it was no longer doing any damage.

Donald Ries, of Ithaca, N. Y., visited the Division of Insects on April 7 and 8, consulting various specialists and conferring with Mr. Rohwer on sawflies of the family Siricidae, on which he expects to write a thesis for a doctor's degree at Cornell.

Dr. Ryoza Kanehira, of the Government Research Institute, Formosa, recently called at the Section of Insects to obtain determinations for ants and termites from Peru.

George H. Goss and family recently visited the Division of Insects to see parts of the large collection made by E. D. Dodge and G. H. Goss in their ascent of Mt. Kinabalu, North Borneo, in 1904. Shortly after their return to this country, after the expedition, the first set of the collection of insects was given to the Museum. The collection included very many interesting forms, some of which have already been described, and other await study in connection with revisionary papers. On this expedition they collected a new land shell which Dr. Bartsch named after Mr. Goss, and also collected a new bird which Dr. Richmond named after Mr. Dodge.

Carl Heinrich returned to Washington on April 13, after a three months' trip in Arizona. During this trip Mr. Heinrich assisted in scouting work for the pink boll worm and Thurberia weevil in Arizona and New Mexico, and spent some time with Mr. Wildermuth in studying the southwestern corn borer at Tempe, Ariz. Aside from the general scouting work on the corn borer, Mr. Heinrich had but little opportunity to collect specimens for the collection.

Dr. F. M. Root, of Johns Hopkins School of Hygiene and Public Health, who has called on Dr. Dyar at the Division of Insects several times for determinations of mosquitoes, recently left for a four months' trip to Venezuela, where he expects to obtain more material.

Dr. H. E. Ewing returned on April 26 from a trip to the Southwest where he stopped at San Antonio and Dallas, Tex., Tucson and Tempe, Ariz., and Tallulah, La. The floods in the lower Mississippi Valley prevented the collection of adults of chigger mites around Tallulah, but the work in Arizona and Texas was much more successful, as a great number of specimens of scorpions were collected, and a considerable number were brought home alive for making observations on life histories and development. A few records of serious or fatal stings by scorpions were obtained, and some of them were carefully investigated.

C. H. Curran, of the Entomological Branch, Department of Agriculture, Ottawa, Canada, spent two weeks in April in Washington studying flies in the National Collection, and collecting in the vicinity of the District. He returned to Canada on April 29. While here, besides consulting with the specialists in the National Museum, he conferred with other members of the Bureau, especially those in the Division of Stored-Product Insect Investigations.

H. A. Allard, of the Department of Agriculture, is spending some time with Mr. Caudell in the National Museum studying singing Orthoptera.

J. C. Bridwell, who has been in the Orient for the last few years, has returned to America, and visited the Division of Insects on April 29 and 30. Mr. Bridwell brought with him many specimens which he has collected, and has arranged to have forwarded a considerable series of specimens from India. He is primarily interested in completing his studies on Bruchidae (Mylabridae) and is making an effort to find means for continuing them.

In the last week of April the collection of insects which had been formed by the Division of Truck Crop Insect Investigations was transferred to the Museum, where it will be incorporated with the regular collection. This collection forms an extremely valuable addition to the Museum, as it gives a good series of many important economic pests, and associates immature stages with adults. The specimens are connected with notes by Bureau numbers under the Chittenden series.

TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, Senior Entomologist, in Charge

J. R. Douglass left Estancia, N. M., on April 18 to visit points in Colorado to study the possibility of planning additional work on the Mexican bean beetle there. From Greeley, Colo., he proceeded to Twin Falls, Idaho, where he conferred with Walter Carter, in charge of the Bureau laboratory, regarding some ecological investigations he will conduct against the Mexican bean beetle in New Mexico. He left Twin Falls on April 24.

Rodney Cecil has returned to his temporary substation at Geneva, N. Y., and will there conduct investigations on bean insects.

CEREAL AND FORAGE INSECT INVESTIGATIONS

W. H. Larrimer, Senior Entomologist, in Charge

W. P. Flint, J. S. Houser, J. J. Davis, and C. W. Neiswander were visitors at the Toledo office on April 25 to 26.

Albert Balzar, A. C. Cole, F. F. Dicke, W. H. Dove, Alfred Mentel, George Needham, James Pettis, and D. C. Rhinehart are assisting Dr. Luginbill at the Monroe, Mich., corn borer laboratory.

R. C. Thomas, L. L. Peirce, and Waldo Lupien are assisting L. H. Patch at the Sandusky, Ohio, corn borer laboratory.

Plowing experiments conducted at Sandusky and Defiance, Ohio, during the month of April, have demonstrated the efficiency of the newly developed wide-bottom plows in cleanly turning under standing cornstalks and high cornstubble, without previous treatment. These experiments are a continuation of the series conducted at Sandusky last autumn.

Parasite importations this spring are as follows:

160,970 *Microgaster* cocoons
33,831 *Eulimneria* cocoons
1,661,590 Corn borer larvae, from which five additional
species of parasites will be reared at Arlington

Parasite liberations have already started in New England, Ohio, and Michigan. Imported parasite recoveries this spring as a result of winter collections in New England are:

Eulimneria crassifemur Thom.
Microgaster tibialis Nees.
Angitia punctoria Roman.
Masicera senilis Rond.

William Davison is assisting Mr. Bartley at the Silver Creek, N. Y., laboratory.

Ellery E. Atwood, John L. Breitwieser, Craig W. Eagelson, Robert G. Lassiter, Carol D. Lebert, and Norbert J. Nerney are assisting D. W. Jones at the Arlington, Mass., laboratory.

Construction of ten large parasite conservation cages in Michigan, Ohio, Pennsylvania, and western New York have proceeded rapidly, and should be completed by the first week in May.

Secretary W. M. Jardine and Messrs. Eisenhower and Swain visited the Arlington, Mass., laboratory on April 8.

Prof. Charles T. Brues and Dr. A. Leonard Melander visited the Arlington, Mass., laboratory on April 15.

Dean L. Christenson has been given a three months' appointment as Field Assistant at Salt Lake City, Utah.

Dr. W. H. Larrimer spent the periods April 8 to 12 and April 26 to 30 in Ohio and Michigan, in connection with European corn borer control activities.

Dr. George W. Barber, of the Richmond, Va., substation, spent April 21 in Washington in consultation with Bureau officials.

H. D. Smith, of the Carlisle, Pa., laboratory, made a survey, beginning April 28, of the distribution of the Hessian fly in certain areas of the South.

Glenn C. Barrett has been given a three months' appointment as Field Assistant at Wichita, Kans.

BEE CULTURE INVESTIGATIONS

James I. Hambleton, Apiculturist, in Charge

On April 30 Dr. L. R. Watson, of Alfred, N. Y., formerly connected with the Bee Culture Laboratory, gave a demonstration of his method of artificially inseminating queenbees at the Bee Culture Laboratory before members of the Maryland Beekeepers Association, members of the Department of Entomology of the University of Maryland, and the staff of the Bee Culture Laboratory.

Miss Catherine Lucas, who has been studying the amoebae of insects at Johns Hopkins University under a postgraduate traveling fellowship from the University of London, is continuing this line of investigation at the Bee Culture Laboratory.

Prof. L. M. Bertholf, of Western Maryland College, visited the Bee Culture Laboratory on May 2 to discuss plans preparatory to continuing during the summer his investigations on the responses of the honeybee to light.

Jas. I. Hambleton gave a radio talk over Station WRC on April 27 on "The Honeybee," under the auspices of the Smithsonian Institution.

DECIDUOUS-FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Associate Chief of Bureau, in Charge

Herbert H. Schwardt, a graduate of the Kansas Agricultural College, has been appointed Junior Entomologist, and will be associated with A. J. Ackerman in fruit insect investigations at Bentonville, Ark.

Lawrence C. McAlister, Jr., a graduate of the South Carolina Agricultural College, has been appointed Junior Entomologist and assigned to duty at Riverton, N. J., where he will be associated with E. R. Van Leeuwen in codling moth investigations.

On March 23 Oliver I. Snapp gave an address at Clemson College, S. C., on "Insects Attacking the Peach in the South and How to Control Them." Mr. Snapp states that the plum curculio infestation in the Georgia Peach Belt has again become serious. The present infestation is apparently the heaviest that has occurred there in five years. Five bushels of peach drops collected on April 11 have already given up 4,481 curculio larvae.

LIBRARY

Mabel Colcord, Librarian

NEW BOOKS

Bonanse, S. J.

La plaga de los ocotes y la conservacion de los bosques en los Estados Unidos Mexicanos. 114 p. I. Escalante, Mexico, 1914.

Bouvier, E. L.

Le communisme chez les insectes, 291 p., illus. Ernest Flammarion, Paris, 1926. (Bibliothèque de philosophie scientifique.)

Brenchley, W. E.

Inorganic plant poisons and stimulants. Ed. 2, 133 p. University Press, Cambridge, [Eng.] 1927. Bibliography p. 108-127.

Cambridge Natural History. Ed. by S. F. Harmer and A. E. Shipley. 10 v., fully illus. Science, Apr. 22, 1927, p. vi, states "The ten volumes, fully illustrated, of this standard work are available for a short time at a special price of \$35.00 net. Usually priced at \$7.00 per volume." The Macmillan Company, 60 Fifth Avenue, New York City.

Delacroix, Georges.

Maladies des plantes cultivees. 2v., illus. J.-B. Baillière et fils, Paris, 1927. (Encyclopedie agricole, publiée par une reunion d'ingenieurs agronomes sous la direction de G. Wéry.) v. 1, Maladies non parasitaires, par Georges Delacroix. 415 p., 1927; v. 2, Maladies parasitaires. Ed. 3, par A. Maublanc. 456 p., 1926.

Evenius, Joachim.

Unsere Honigbiene, ihr Bau, ihr Leben und ihre Zucht. 108 p., illus. Ferd. Dummlers Verlagsbuchhandlung, Berlin & Bonn, 1926.

Frison, T. H.

A list of the insect types in the collections of the Illinois State Natural History Survey and the University of Illinois. p. 137-309. Urbana, February, 1927. (Illinois Dept. Registration and Education. Division Natural History Survey. Bul. 16, Art. 4.)

Hampton, F. A.

The scent of flowers and leaves. Its purpose and relation to man. 135 p., Dulau, London, 1926. 6 shillings.

Jeannel, René.

Faune cavernicole de la France avec une étude des conditions d'existence dans le domaine souterrain. 334 p., illus., Paul Lechevalier, Paris, 1926. (Encyclopédie entomologique Ser. A, v. 7.) Index bibliographique, p. 318-322.

Jones, D. C. and Daniels, G. W.

Elements of Mathematics. University of Manchester, Liverpool, 1927. \$3.00. "For students of economics and statistics. This book is designed for students who have had only a slender training in mathematics and who, in consequence, are afraid of symbols and statistics. No knowledge is assumed beyond a matriculation standard." (Science, April 22, 1927, p. ii.) To be obtained from the Open Court Publishing Company, Wieboldt Hall, School of Commerce, 337 East Chicago Avenue, Chicago, Ill.

Kirby, W. F.

Butterflies and moths in romance and reality. 178 p., illus., 28 col. pl. The Sheldon Press, London, 1927. (First published in 1913.)

Koleopterologische Rundschau, Hrszg. für die Sektion für Koleopterologie der zoologisch-botanischen Gesellschaft in Wien. Bd. 13, nr. 1, Feb. 28, 1927. Redigiert von Franz Heikotinger, Wien. Verlag von Albert Winkler, Wien, 1927.

Loeb, L. B.

Kinetic Theory of Gases. 555 p. McGraw-Hill Book Company, 370 Seventh Avenue, New York City, 1927. \$5.50 net, postpaid. "A text and reference book combining the classical deductions with recent experimental advances in a convenient form for student and investigator. Students will find the method of presentation helpful. Every concept is first discussed in a qualitative fashion. This is followed by a quantitative treatment in which no calculus is required. Then comes a treatment involving the classical conceptions with the application of the calculus, and, finally, the book presents the most modern treatments and a critique of present theories. Special features of the book are the exhaustive discussion of the kinetic theory of low pressure phenomena; the treatment of magnetic and electric properties of gases; and the treatment of the kinetic theory of gaseous ions." (Science, April 22, 1927, p. v.)

Luckiesh, M.

Color and its applications. Ed. 2, enl. 419 p., illus., col. pl., tables. D. Van Nostrand Company, New York, 1921.

Luckiesh, M.

Ultraviolet radiation; its properties, production, measurement and applications. 258 p., pl. D. Van Nostrand Company, New York, 1927.

- Nomenclator animalium generum et subgenerum. Published by the Prussian Academy of Sciences, Berlin. Edited by F. E. Schulze, W. Kükenthal, and K. Heider. "Will not only enumerate all the names of the genera and subgenera, including the palaeontological names, but as far as possible will give for them the exact reference of their first employment. Originally planned not to go beyond the literature of 1909. For all names that originated from 1910 through 1922 the references of the Zoological Record will be given. The entire work will comprise 5 volumes, each of which will be published in 5 issues. Subscriptions are to be sent to the Preussische Akademie der Wissenschaften, Unter den Linden 38, Berlin N. W. 7. 15 marks for every issue (160 pages approximately); 20 marks after March 31, 1927." (Science, March 18, 1927, p. 282.)
- Patch, E. M.
First Lessons in Nature Study. 287 p., illus. The Macmillan Company, New York, 1927.
- Payne, Nellie M.
Freezing and survival of insects at low temperatures. (Quarterly Review of Biology, v. 1, No. 2, p. 270-282, April, 1926.) List of literature, p. 280-282.
- Perold, A. I.
A treatise on viticulture. 696 p., illus. Macmillan and Company, limited, 1927. Bibliography, p. 679-684. Diseases caused by animals, p. 486-508. "This treatise is the most complete and up-to-date work on viticulture and grape products existing in the English language." Nature, Supplement, Feb. 26, 1927, p. ii. 25 shillings net.
- Rehder, Alfred.
Manual of Cultivated Trees and Shrubs. The Macmillan Company, 60 Fifth Avenue, New York City, 1927. \$10.50. "A complete handbook describing fully 2,350 species, besides numerous less important species. The index contains more than 13,000 names." Science, Apr. 22, 1927, p. vi.
- Richard, R. A. R.
Le tetrachlorure de carbone dans le traitement des affections parasitaires des animaux domestiques. 75 p. Bosq freres & Riou, Lyon, 1926. At head of title: Ecole nationale veterinaire d'Afort 1926 No. 74. These pour le doctorat veterinaire.
- Reitz, H. L.
Mathematical Statistics. The Open Court Publishing Company, 337 East Chicago Avenue, Chicago, Ill., 1927. \$2.00. "Third Carcus mathematical monograph. Considerable portions of the present monograph can be read by those who have relatively little knowledge of college mathematics." Science, April 22, 1927, p. ii.
- Rogers, C. G.
Textbook of Comparative Physiology. McGraw-Hill Book Co., New York, 1927. \$5.50. "Clear pictures of life processes in general; offers a wealth of information about the physiology of invertebrates not obtainable in our usual books of reference, logical, interesting." Science, April 22, 1927, p. 400.

Root, F. M.

Studies of Brazilian Mosquitoes, I. The anophelines of the Nyssorhynchus group. (Amer. Jour. of Hygiene, v. 6, No. 5, p. 686-717, Sept. 1926.)

Rosenau, M. J.

Preventive Medicine and Hygiene... Ed. 5. 1458 p., illus., col. pl. Appleton, New York and London, 1927. Insect-borne diseases, p. 260-381. Contains bibliographic references.

Schröder, Christoph, ed.

Handbuch der Entomologie. lfg. 25-26. (Bd. 2, p. 481-610). Gustav Fischer, Jena, 1927.

Page 481-572, Prochnow, Oskar, Die Färbung der Insekten; p. 573-591, C. Schröder, Die Wärmeschutztracht-theorie; p. 592-610, Holdhaus, Karl, Die geographische Verbreitung der Insekten.

Tillyard, R. J.

The Insects of Australia and New Zealand. 560 p., illus., col. pl. Angus & Robertson, Ltd., Sydney, Australia, 1926. "A great contribution to the classification of insects in general; wealth of detail, abundance of figures showing structure, beautiful colored plates." Science, Apr. 15, 1927, p. 374.

Walter, Gerhard.

Die Bekämpfung der Forleule und der Nonne in den Oberförstereien Biesenthal und Sorau im Jahre 1925. 86 p. Neumann, Neudamm, 1926.

Zinsser, Hans and Tyzzer, E. E.

A Textbook of Bacteriology... Ed. 6. 1053 p., illus. Appleton, New York and London, 1927.

